



North Carolina Institute of Medicine
shaping policy for a healthier state

A black and white photograph of a diverse group of approximately 12 children and three adults, all smiling and looking towards the camera. They are arranged in a cluster, with some standing and some sitting or kneeling.

2012 • North Carolina • 2012 •
Child Health Report Card

WITH FINANCIAL SUPPORT FROM:



Annie E. Casey Foundation



Access to Care and Preventive Health

Promoting and improving the health and well-being of our children is critical to North Carolina's future. Health during childhood impacts not only adult health, but also educational attainment, employment, and social and economic status. Preventive and primary care are essential to improving the health and well-being of North Carolina's 2.3 million children ages 0-18.

While children and families may face multiple barriers to accessing health care, the foremost barrier is the lack of health insurance. In North Carolina, children who lack health insurance are more likely to forego or delay care and have less access to health care services. Many children (9.4% or approximately 216,000) in North Carolina are uninsured. In North Carolina, Medicaid and Health Choice, North Carolina's State Child Health Insurance Program, provide health care coverage for children whose family income falls below 200% of the federal poverty guidelines, or \$46,000 for a family of four. In 2011, these two programs provided health care coverage for almost half of the children in our state (1,093,504).

Although having health care coverage is necessary for gaining access to affordable health care services, having health insurance does not guarantee that an individual will receive preventive and primary care services. In North Carolina, Medicaid and Health Choice provide coverage for all annual well-child visits for preventives care under Bright Futures, the child health supervision guidelines developed by the American Academy of Pediatrics. Preventive care visits provide opportunities for immunizations, developmental and health screenings, early detection of emerging concerns, and an opportunity to offer parents health education and advice. Similarly, Medicaid and Health Choice provide coverage for a preventive dental care visit every six months, which follows the recommendations of the American Academy of Pediatric Dentistry. Although these services are covered, data show that approximately four-in-ten Medicaid-enrolled children do not receive the recommended levels of preventive care.

North Carolina's Community Care of North Carolina (CCNC) system of managed care for individuals enrolled in public health insurance is working to address the non-financial barriers to care through the use of the medical home model, patient and family education, expanding provider networks, and care managers. Medicaid, Health Choice, CCNC and other efforts to provide access to preventive and primary care play a critical role in providing children the care they need to remain healthy.

| Grade | Health Indicator | Current Year | Benchmark Year | Percent Change | Trend |
|---|--|--------------|----------------|----------------|-----------|
| | Insurance Coverage | 2011 | 2006 | | |
| B | Percent of all children (ages 0-18) uninsured ⁺ | 9.4% | 13.6% | -30.9% | Better |
| | Percent of children below 200% of poverty uninsured ⁺ | 12.8% | - | - | - |
| | Number of children covered by public health insurance (Medicaid or Health Choice) (in December) | 1,093,504 | 864,664 | 26.5% | Better |
| | Percent of Medicaid-enrolled children receiving preventive care ⁺ | 56.8% | - | - | - |
| | Breastfeeding | 2009 | 2004 | | |
| C | Percent of infants ever breastfed | 68.2% | 73.0% | -6.6% | Worse |
| | Percent of infants breastfed at least six months | 38.3% | 40.9% | -6.4% | Worse |
| | Immunization Rates | 2011 | 2006 | | |
| C | Percent of children with appropriate immunizations: | | | | |
| | Ages 19-35 months ¹ | 75.3% | 81.9% | -8.1% | Worse |
| | At school entry ⁺ | 97.1% | 97.3% | -0.2% | No Change |
| | Early Intervention | 2011 | 2006 | | |
| A | Number of children (ages 0-3) enrolled in early intervention services to reduce effects of developmental delay, emotional disturbance, and/or chronic illness ⁺ | 19,523 | 15,160 | 28.8% | Better |
| | Environmental Health | 2010 | 2005 | | |
| A | Lead: Percent of children (ages 1-2): ² | | | | |
| | Screened for elevated blood levels | 51.3% | 40.6% | 26.4% | Better |
| | Found to have elevated blood lead levels | 0.4% | 0.9% | -55.6% | Better |
| | Asthma: | 2011 | 2006 | | |
| | Percent of children ever diagnosed | 17.5% | 17.1% | 2.3% | No Change |
| Hospital discharges per 100,000 children (ages 0-14) (2010, 2005) | 166.0 | 207.9 | -20.2% | Better | |
| | Dental Health | 2010 | 2005 | | |
| C | Percent of children: ⁺ | | | | |
| | With untreated tooth decay (kindergarten) | 15.0% | 22.0% | -31.8% | Better |
| | With one or more sealants (grade 5) | 44.0% | 43.0% | 2.3% | No Change |
| | Percent of Medicaid-eligible children enrolled for at least 6 months who use dental services: | 2011 | 2006 | | |
| | Ages 1-5 | 58.0% | 47.0% | 23.4% | Better |
| | Ages 6-14 | 64.0% | 55.0% | 16.4% | Better |
| Ages 15-20 | 49.0% | 44.0% | 11.4% | Better | |

Health Risk Behaviors

Access to affordable, quality health care is important when considering the health and well-being of our children, but health care alone is not enough to improve health outcomes. Children's health and well-being are also impacted by their family's income, educational achievement, race, ethnicity, and other environmental factors.

The relationship between income and health is quite strong; individuals with lower incomes have poorer outcomes on almost every indicator of health, including access to care, health behaviors, disease, and mortality. Growing up in a family living in poverty or near poverty negatively impacts a child's health throughout his or her life because the conditions that shape health in childhood influence opportunities for health throughout life. Education and health outcomes are also tightly intertwined; success in school and the number of years of schooling impact health across the lifespan. People with more years of education are more likely to live longer, healthier lives, have healthier children, and are less likely to engage in risky health behaviors. Policies that aim to reduce poverty and or promote education are critical components of health policy.

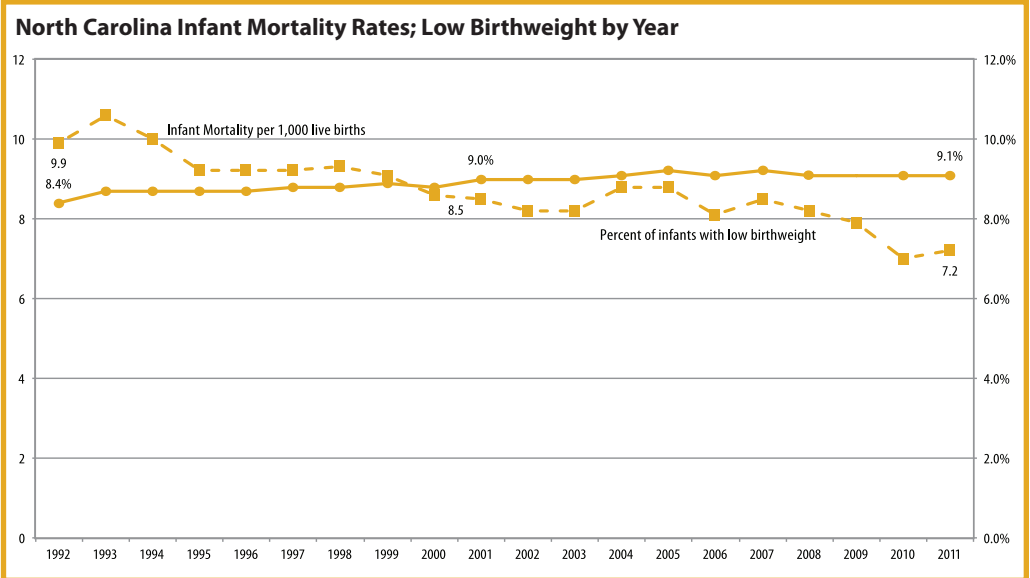
4-Year Cohort Graduation Rate Report 2008-09 Entering 9th Graders Graduating in 2011-12 or Earlier; State Wide Results

| Subgroup | Percent |
|----------------------------|---------|
| All Students | 80.4 |
| Male | 76.5 |
| Female | 84.6 |
| American Indian | 73.7 |
| Asian | 87.5 |
| Black | 74.7 |
| Hispanic | 73.0 |
| Two or More Races | 80.6 |
| White | 84.7 |
| Economically Disadvantaged | 74.7 |
| Limited English Proficient | 50.0 |
| Students With Disabilities | 59.9 |

| Grade | Health Indicator | Current Year | Benchmark Year | Percent Change | Trend |
|--------------------------------------|--|--------------|----------------|----------------|-----------|
| High School Graduation | | 2012 | 2007 | | |
| B | Percent of high school students graduating on time with their peers ⁺ | 80.4% | 69.5% | 15.7% | Better |
| Child Poverty | | 2011 | 2006 | | |
| D | The percent of children in poverty | | | | |
| | Ages 0-5 | 30.3% | 23.6% | 28.4% | Worse |
| | Ages 0-18 | 25.6% | 20.2% | 26.7% | Worse |
| Teen Pregnancy | | 2011 | 2006 | | |
| C | Number of pregnancies per 1,000 girls (ages 15-17): | 21.4 | 35.1 | -39.0% | Better |
| Weight Related | | 2011 | 2006 | | |
| | Percent of Children: | | | | |
| | Meeting the recommended guidelines of 60 minutes or more of exercise 7 days a week | | | | |
| D | Ages 2-9 | 30.8% | - | - | - |
| | Ages 10-17 | 27.5% | - | - | - |
| | Meeting the recommended guidelines of less than two hours of screen time every day | | | | |
| | Ages 2-9 | 80.8% | - | - | - |
| | Ages 10-17 | 68.1% | - | - | - |
| | Ages 10-17 who are overweight or obese | 30.6% | 30.9% | -1.0% | No Change |
| Tobacco Use | | 2011 | 2007 | | |
| C | Percent of students (grades 9-12) who used the following in the past 30 days: | | | | |
| | Cigarettes | 15.5% | 19.0% | -18.4% | Better |
| | Smokeless tobacco | 6.6% | 8.6% | -23.3% | Better |
| Alcohol & Substance Abuse | | 2011 | 2007 | | |
| D | Percent of students (grades 9-12) who used the following: | | | | |
| | Marijuana (past 30 days) | 24.2% | 19.1% | 26.7% | Worse |
| | Alcohol (including beer) (past 30 days) | 34.3% | 37.7% | -9.0% | Better |
| | Cocaine (lifetime) | 7.1% | 7.0% | 1.4% | No Change |
| | Methamphetamines (lifetime) | 4.1% | 4.0% | 2.5% | No Change |
| | Prescription drugs without a doctor's prescription (lifetime) | 20.4% | 17.0% | 20.0% | Worse |

Death and Injury

Ensuring the health and safety of children is critical to our state's current and future well-being. The most significant markers of children's health and safety are the infant and child death rates. North Carolina's infant and child death rates have been steadily decreasing over the past thirty years. This is due primarily to a significant decrease in our infant mortality rate from almost 15 per 1,000 live births in 1980 to 7 per 1,000 in 2011. The key drivers of infant mortality are complications of prematurity, infections, and birth defects. Rates of infant mortality have declined due to advances in the care of premature infants and birth defects. Although North Carolina has seen significant declines in infant mortality over the past twenty years, there has been a



slight increase in the percentage of infants born with low birthweights, from 8.4% to 9.1%. Low birthweight is most often due to prematurity. Prematurity is associated with higher rates of brain injury, developmental delay, chronic lung disease, and eye disease. Due to significant advances in the care of premature infants, more premature babies survive infancy than did previously. Improving outcomes for premature infants has been a monumental advance. However, given the costs and long-term health and developmental consequences of prematurity, more attention needs to be paid to preventing premature births.

Finding successful ways to reverse this trend are critical to improving the health and well-being of our children. North Carolina has implemented a number of public health and medical interventions associated with decreases in prematurity. For example North Carolina has programs supporting increased intervals between pregnancies, reducing elective c-sections, smoking cessation among pregnant women, and progesterone injections for pregnant women with a history of premature delivery. However access to such programs and interventions are limited, and population rates of low birthweight continue to increase. Community Care of North Carolina's new Pregnancy Medical Home Initiative seeks to address these risk factors and others and will reach all pregnant women receiving Medicaid. Innovative approaches like the Pregnancy Medical Home Initiative are needed for North Carolina to improve outcomes for all infants.

| Grade | Health Indicator | Current Year | Benchmark Year | Percent Change | Trend |
|----------|--|--------------|----------------|----------------|-----------|
| | Birth Outcomes | 2011 | 2006 | | |
| B | Number of infant deaths per 1,000 live births | 7.2 | 8.1 | -11.1% | Better |
| | Percent of infants born weighing less than 5 lbs., 8 ozs (2,500 grams) | 9.1% | 9.1% | 0.0% | No Change |
| | Child Fatality | 2011 | 2006 | | |
| B | Number of deaths (ages 0-17) per 100,000 | 57.4 | 73.2 | -21.7 | Better |
| | Number of deaths: | | | | |
| | Motor Vehicle-related | 98 | 163 | - | - |
| | Drowning | 20 | 23 | - | - |
| | Fire/Burn | 7 | 15 | - | - |
| | Bicycle | 2 | 6 | - | - |
| | Suicide | 23 | 21 | - | - |
| Homicide | 43 | 65 | - | - | |
| Firearm | 41 | 45 | - | - | |
| | Child Abuse and Neglect | 2011 | 2006 | | |
| C | Number of children: [†] | | | | |
| | Child abuse and neglect reports investigated [‡] | 71,361 | 70,225 | - | - |
| | Substantiated as victims of abuse or neglect [‡] | 10,263 | - | - | - |
| | Recommended services [‡] | 29,051 | - | - | - |
| | Recurrence of Maltreatment | 7.7% | 7.3% | 4.5% | No Change |
| | Confirmed child deaths due to abuse | 24 | 34 | - | - |

For 18 years, the *North Carolina Child Health Report Card* has tracked the health and well-being of children and youth in our state. The report card compiles more than 40 indicators of child health and safety into one easy-to-read document that helps policymakers, health professionals, the media, and concerned citizens monitor children's health outcomes, identify emerging trends, and plan future investments.

The Report Card presents data for the most current year available, usually 2011, and a comparison year, or benchmark, usually 2006.

Because of space constraints, data by race and ethnicity is presented for just one indicator—cohort graduation rate. It is important to note that large racial and ethnic disparities exist for many of the indicators included. In general children of color have poorer health status and experience poorer health outcomes than their peers. These disparities are not new, and while some are slowly shrinking (e.g. late or no prenatal care), others are actually increasing (e.g. poverty, teen pregnancy). Significant improvements in child health can only be achieved if we address these disparities in health status, care, and outcomes. Additional disparity data for select indicators can be found in the corresponding county-level data cards that are available on Action for Children North Carolina's website www.ncchild.org.

**“If our American way of life fails the child,
it fails us all.”—Pearl S. Buck**

North Carolina's future prosperity depends on the health and well-being of the next generation. When children grow up healthy, safe, and connected to the resources that enable them to thrive, they are better prepared to reach their full potential and succeed in school, work, and life.

A substantial body of research shows that children's health outcomes are shaped by a wide array of social, economic and environmental factors. Child health was once thought to be the product of quality medical care, individual behaviors, and genetics; however, research now shows that where a child lives, family income, and parental education all exert powerful influences on a child's overall health status.

The Report Card offers keen insights into the socioeconomic factors that influence child health in North Carolina:

- In the aftermath of the economic downturn, more children now live in poverty than ever before. Poverty presents a significant threat to healthy growth and development, and is associated with reduced health outcomes.
- As more children and families slipped into poverty during the recent economic downturn, Medicaid and North Carolina Health Choice helped preserve children's access to health insurance. Children enrolled in public health insurance programs are more likely to receive preventive care and well-child screenings than their uninsured peers.
- Just over eight in ten high school freshmen graduate with their peers four years later. The number of students graduating from high school on time has increased significantly in recent years— a clear success for the state. And yet, a closer look at the data shows wide disparities by gender, race, ethnicity, economic status and other factors.
- All children deserve a healthy start in life. The percentage of infants born at a low birth weight, which is an important indicator of maternal health, prenatal care and environmental quality, remains unacceptably high in North Carolina.

As our understanding of the fundamental factors that shape children's health outcomes continues to evolve, so too must our strategies to improve the health of children and youth in North Carolina. Promoting positive physical, mental, and behavioral health is critical, but doing so in isolation ignores the significant impact of other factors. Health providers, social service providers, educators, and others have embraced this expanded understanding of factors shaping children's health. In communities across the state, agencies are collaborating across sectors to build coalitions to tackle the economic, social, and environmental factors that impact health outcomes. Increasingly, public, private and nonprofit organizations are choosing collaboration over isolation, exploring the areas where their work overlaps and their impact can be amplified through new partnerships. The trend of increased collaboration is encouraging, indicating a growing commitment to implement strategies to improve child health in innovative ways. Such strategies include evidence-based programs, policies, and services that promote economically secure families and high-quality education as part of a comprehensive approach to improving children's health and well-being in North Carolina.

Data Sources 2012 Child Health Report Card

Access to Care and Preventive Health

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Health Risk Behaviors

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Death and Injury

Infant Mortality and Low Birth-Weight Infants: State Center for Health Statistics, North Carolina Department of Health and Human Services. Infant Mortality Statistics, Tables 1 and 10. Available online at: <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>; *Child Fatality and Deaths Due to Injury:* State Center for Health Statistics, North Carolina Department of Health and Human Services. Child Deaths in North Carolina. Available online at: <http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm>. *Child Abuse and Neglect and Recurrence of Maltreatment:* Duncan, D.F., Kum, H.C., Flair, K.A., Stewart, C.J., and Weigensberg, E.C. Special data request July 2012. Available online from the University of North Carolina at Chapel Hill Jordan Institute for Families website. URL: <http://ssw.unc.edu/cw/>; *Firearm Deaths and Child Abuse and Neglect Homicides:* information was obtained from the North Carolina Child Fatality Prevention Team (Office of the Chief Medical Examiner) for this report. However, the analysis, conclusions, opinions and statements expressed by the author and the agency that funded this report are not necessarily those of the CFPT or OCME.

Data Notes 2011 Child Health Report Card

1. Immunization is measured for children 19-35 months of age using the 4:3:1:3:3:1 measure.
 2. Elevated blood lead level is defined as 5 micrograms per deciliter or greater. This definition has been revised from 10 micrograms per deciliter or greater.
 3. Screen time includes TV, videos, or DVDs OR playing video games, computer games or using the Internet.
 4. Overweight is defined as a body mass index equal to or greater than the 85th percentile using federal guidelines; obese is defined as equal to or greater than the 95th percentile.
 5. Findings represent exclusive counts of reports investigated in a state fiscal year. The number substantiated includes those substantiated of abuse, neglect, or abuse and neglect.
- + Data for indicators followed by a + sign are fiscal or school year data ending in the year given. For example, immunization rates at school entry labeled 2010 are for the 2009-2010 school year.

Grades and Trends

Grades are assigned by a group of health experts to bring attention to the current status of each indicator of child health and safety. Grades reflect the state of children in North Carolina and are not meant to judge the state agency or agencies providing the data or the service. Agencies like those responsible for child protection and dental health have made a great deal of progress in recent years that are not reflected in these grades. The grades reflect how well our children are doing, not agency performance. Grades are a subjective measure of how well children in North Carolina are faring in a particular area.

Data trends are described as "Better," "Worse," or "No Change". Indicators with trends described as "Better" or "Worse" experienced a change of more than 5% during the period. A percentage change of 5% or less is described as "No Change." Percent change and trends have not been given for population count data involving small numbers of cases. Due to data limitations, only the indicators for alcohol and drug use have been tested for statistical significance. Grades and trends are based on North Carolina's performance year-to-year and what level of child health and safety North Carolina should aspire to, regardless of how we compare nationally.

Laila A. Bell from Action for Children North Carolina and Berkeley Yorkery from the North Carolina Institute of Medicine led the development of this publication, with valuable input from the panel of health experts and from many staff members of the North Carolina Department of Health and Human Services.

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